

phyes punctatissima, Bosc., is numerous round Sibertswold and out on the Warren, and, indeed, probably wherever it is looked for in suitable places.

I have done no systematic collecting this year, but *Decticus verrucivorus* and *Apterygida albipennis* make a fair record for a season's work. Luck seems to be sometimes more profitable than persistence. The ground where these two rarities occur will probably before long be occupied by a colliery, but it is to be hoped that steps will be taken to preserve the remnants of the aboriginal fauna of East Kent.

Paracymus æneus, Germ.—a British Beetle.

By R. S. MITFORD, C.B., F.E.S.

Last year I obtained from Mr. W. H. Harwood, of Colchester, an example, as it was supposed, of *Paracymus nigro-æneus*. Recently my friend, Mr. E. A. Waterhouse, when looking over my collection of British coleoptera, expressed some doubt as to the identity of this species with *P. nigro-æneus*, and I sent it to him for examination. He has now informed me that it is undoubtedly *P. æneus*. I have since obtained six more specimens from Mr. Harwood, all of which turn out to be *P. æneus*. They were taken on the North Essex coast in June, 1898.

The Rev. Canon Fowler describes (*British Coleoptera*, vol. i., p. 226) *P. nigro-æneus* as having the maxillary palpi "broadly pitchy at the apex, and the legs pitch-black." He goes on to say "we do not possess the true *P. æneus*, which is rather smaller and narrower than *P. nigro-æneus*, with the palpi unicolorous red, and the legs also red." These characteristics of *P. æneus* are borne by all the examples sent to me by Mr. Harwood, and I think there can be no doubt that that species is established as a British beetle, and should appear in the British lists. Probably it will be found in other collections, in which it may have been placed as *P. nigro-æneus*. I am indebted to Mr. E. A. Waterhouse for his kindness in examining and identifying my specimens.

Myrmecophilous Notes for 1907.

By H. St. J. K. DONISTHORPE, F.E.S.

FORMICIDÆ.—*Formica sanguinea* was discovered by us at Aviemore and Nethy Bridge, in the Highlands, in July, its first record for Scotland. Mr. Willoughby Ellis has found it in the Midlands this year, also a new record.

Leptothorax unifasciatus.—We found a nest of this little ant, with winged male and female, in company with a nest of *Lasius niger*, under a stone, at St. Margaret's Bay.

COLEOPTERA.—*Atemeles emarginatus* was taken by us at Porlock, with *Formica fusca*, in April, and *Atemeles paradoxus* was taken, both by Professor Beare and ourselves, with its host, *Formica rufibarbis* var. *fusco-rufibarbis*, at Whitsand Bay, also in April.

Lomechusa strumosa.—This grand species was again found by us at Woking this year, with *Formica sanguinea*, in some numbers; some 60 specimens being taken in the spring in one nest alone. We have kept it alive, and have established it in an observation-nest of the ant, and have observed the courtship for the first time. We also discovered

that it can give off the "*Myrmedonia*" smell when seized, and have dissected it under the microscope, and disclosed the glands which contain the acid.

Myrmedonia limbata, Pk., was taken with *Formica sanguinea* at Woking.

Myrmedonia cognata.—When a few *Lasius fuliginosus* were put into a small bowl containing several *Myrmedonias*, one of this species was observed to immediately attack an ant and kill it, biting it behind the head.

Staphylinus stercorarius was taken in a nest of *Myrmica scabrinodis*, at the Forth Bridge, in July.

Othius myrmecophilus was taken with *Formica sanguinea* at Nethy Bridge.

Ptilium myrmecophilum.—Dr. Joy has taken this little species with *Formica rufa* at Bradford. Chislehurst and Scarborough are the only two records south of Scotland given by Fowler. Bagnall has taken it in Northumberland and Durham, and we have taken it at Oxshott in June.

Ptenidium gressneri, Er., occurred with *Lasius fuliginosus* at Sherwood Forest in July.

Dendrophilus punctatus has been bred by us this year in our observation-nests of both *Lasius fuliginosus* from Wellington College and *Formica exsecta* from Bournemouth.

DIPTERA.—*Microdon mutabilis*.—On April 18th, a larva and pupa of this interesting fly were taken on the underside of a stone over a nest of *Formica fusca* at Porlock, and next day a number of larvæ were found in the galleries of another nest. This nest was taken, female, workers, and all, and established as an observation-nest in my study. A larva pupated on April 24th, and hatched May 21st. The pupa puts out two small horns in front a day or two after pupation. The ants are said to nurse these larvæ as they do their *Coccidae*. I have seen them gently bite at the larva. The latter generally sit in the bare galleries of the nest among the ants; there are still a good many in my nest, which will probably hatch out next year.

The *Scatopse* and the *Phyllomyzas* have hatched out of my *Formica rufa* and *Lasius fuliginosus* nests in some numbers, as usual.

HETEROPTERA.—*Piezostethus formicetorum* was taken in some numbers with *Formica rufa* at Rannoch, it has not been taken in Britain since Buchanan-White first discovered it at Braemar.

BRACONIDÆ.—*Chasmodon apterus* was bred out of my *Formica fusca* nest from Porlock on July 7th. It is recorded by Carpentier with *Lasius niger* in France.

Sp. 1, of my last year's list. I have bred a male of this handsome species out of my *Formica rufa* nest this year.

Sp. 2 I have bred some six or seven specimens of a yellow *Brachion* from my *F. fusca* nest from Porlock.

CYNIPIDÆ.—*Kleditoma myrmecophila*, Keiffer, n. sp. I bred this species, one of the parasitic Cynipids, new to science, in some numbers, in my *Lasius fuliginosus* nest from Wellington College. For description see "*Ann. de la Soc. Scientifique de Bruxelles*," vol. 32.

PSEUDOSCORPIONINA.—*Chernes scorpioides*.—This species, which has been kindly identified for me by Mr. Wallis Kew, has been taken on several occasions with *Formica rufa*, at Weybridge. Mr. Kew went

with me one day, and I was able to show him the Chelifer in the nest. I have since taken it, with *F. rufa* at Buddon Wood.

LEPIDOPTERA.—*Tineina*.—I bred two little moths from my *Formica exsecta* nest from Bournemouth. Mr. Eustace Banks tells me they are certainly distinct from all our known British species of Gelechiids, and perhaps new to science.

Polyommatus icarus.—Mr. A. L. Rayward has shown that this species, like *Lycaena arion*, *Agriades corydon*, and *Agriades bellargus*, is possessed of a gland which secretes a fluid very attractive to ants. (*antea*, p. 103).

Agriades corydon.—Mr. Rayward having kindly sent me two larvæ of *P. corydon*, I introduced the following ants to them: *Formica rufa*, *F. sanguinea*, *F. exsecta*, *F. fusca*, and *Lasius fuliginosus*. The larvæ were put into plaster nests with glass tops, and six or eight specimens of an ant put in with them. Most lepidopterous larvæ, under these circumstances, are attacked and killed, and I often use them to feed my ants, but such was not the case with these larvæ. One *Formica sanguinea* seized a *corydon* larva and dragged it along a little way, the caterpillar remaining quite rigid, but soon dropped it, and all the ants mostly sat on the larva at different times, tapping the posterior part of the body with their antennæ. I left the caterpillars with a species of ant for a week at a time, and I put one into my *F. rufa* nest itself, where it crawled about among hundreds of ants without coming to any harm.

ACARINA.—*Trachyropoda laminosa*, C. B.—I took this species with *Lasius flavus* at Whitsand Bay, in April.

Trachyropoda bostocki, Mic.—I took this large and rare species in some numbers in nest of *Lasius umbratus* at Whitsand Bay.

Urotrachytes formicarius, Lubbock.—I took it with *Lasius flavus* in June, on Arthur's Seat, Edinburgh.

Trachyropoda excavata, Wasm.—I took this species, which is new to Britain, and recorded for the first time here, with *Lasius fuliginosus* at Sherwood Forest.

Urodiscelia ricasoliana, Berl., was taken with *Lasius fuliginosus* in Sherwood Forest.

Laelaps myrmecophylus, Berl., was taken with *Formica rufibarbis* var. *fusco-rufibarbis*, in plenty, at Whitsand Bay.

Laelaps equitans, Mic., was taken in nests of *Tetramorium caespitum* at Whitsand Bay. The mite rides on the ants, jumping off and on as they run along.

Laelaps cuneifer, Mic.—I took this species with *Formica rufa* in some numbers at Weybridge, in May.

Laelaps oophilus, Wasm., a new species to Britain, was taken on and among the egg-masses of *Formica fusca* at Porlock, and of *F. rufibarbis* var. *fusco-rufibarbis* at Whitsand Bay.

Antennophorus grandis, Berl.—This interesting species was found in plenty at Porlock, and in Sherwood Forest with *Lasius fuliginosus*.

Cillibano comata.—This species, new to Britain, was taken in plenty on the larvæ of *Lasius flavus* at Whitsand Bay.

MYRIAPODA.—*Blanjulus guttulatus* was bred out of my observation nest of *Formica exsecta* in some numbers this year.

(To be continued).